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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/657,458	09/08/2003	Rakesh Agrawal	ARC920030066US1	9801

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EXAMINER

RAYYAN, SUSAN F

ART UNIT PAPER NUMBER

2167

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/06/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/657,458

Applicant(s)

AGRAWAL ET AL.

Examiner

Susan F. Rayyan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 9/8/2003.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

### **DETAILED ACTION**

1. Claims 1-35 are pending.

#### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on September 18, 2007 was filed before First Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

#### ***Claim Rejections - 35 USC § 101***

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

the claimed invention is directed to non-statutory subject matter.

To be statutory, a claimed computer-related process must either: (A) result in a physical transformation outside the computer for which a practical application is either disclosed in the specification or would have been known to a skilled artisan, or (B) be limited to a practical application with useful, concrete and tangible result.

A practical application can be either physical transformation or a useful, concrete and tangible result.

**Claims 1-7,9-33,35 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.**

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As per claim 1, recite a method of selectively sharing a plurality of distributed access-controlled documents, comprising a plurality of content providers cooperating to create a privacy-preserving index structure and the privacy-preserving index structure mapping a plurality of keywords representing a content to be shared to the plurality of content providers. The claims do not provide a tangible result such as returning a search result to the user or storing the results in memory. Claims 9-33, 35 are rejected on the same rationale. Claims 8, 34 would resolve the issue if moved up into the independent claims.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1,25,31 rejected under 35 U.S.C. 102(b) as being anticipated by US 5,845,278 issued to Steven T. Kirsh et al (“Kirsh”).**

**As per claim 1 Kirsch anticipates:**

a plurality of content providers cooperating to create a privacy-preserving index structure (column7, lines 55-57, as collection meta index); and  
the privacy-preserving index structure mapping a plurality of keywords representing a

content to be shared to the plurality of content providers (column 5, lines 33-45).

Claims 25, 32 are rejected based on the same rationale as claim 1.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 2-8, 26-28,32-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch as applied to claim 1 above, and further in view of US 2004/0260680 issued to Steven Francis Best et al ("Best").**

**As per claim 2** same as claim arguments above and Kirsh teaches wherein the content providers comprise a provider specific search interface for receiving a query (column 5, lines 34-47, as search interface). Kirsh does not explicitly teach "for authenticating a searcher ". Best does teach this limitation (paragraph 115, as checking userid from the search query) to for personalized searching in a distributed data processing system. It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to modify Kirsh with authenticating a searcher to for personalized searching in a distributed data processing system as described by Beast (paragraph 8, lines 1-3).

**As per claim 3** same as claim arguments above and Kirsch teaches:

further comprising the searcher submitting the query containing one or more keywords to a privacy-preserving index system (column 6, lines 35-62 as submitting query).

**As per claim 4** same as claim arguments above and Kirsch teaches:

further comprising returning a list of content providers that present the one or more keywords in the content to be shared (column 10, lines 25-30, as the list of selected collections are presented to the user ).

**As per claim 5** same as claim arguments above and Kirsch teaches:

wherein the list of content providers comprises at least 50% false positive content providers(column 10, lines 25-30, as the list of selected collections are presented to the user ).

**As per claim 6** same as claim arguments above and Best teaches:

further comprising the searcher submitting the query annotated with an identity for the searcher to a specified content provider on the list of content providers (paragraph 115, as checking userid from search query).

**As per claim 7** same as claim arguments above and Best teaches:

further comprising the specified content provider authenticating the identity of the searcher for allowing access to the content to be shared(paragraph 115, as checking

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userid from search query).

**As per claim 8** same as claim arguments above and Best teaches:

further comprising the specified content provider returning to the searcher one or a plurality of documents that match the one or more keywords (Figure 13, search result list).

Claims 26-28, 32-34 are rejected based on the same rationale as claims 2-4,8 above.

**Claims 9-10-12,19, 21-22, 29-30,35 rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch as applied to claim1 above, and further in view of US 2002/0026345 issued to Ari Juels ("Juels").**

**As per claim 9** same as claim arguments above and Kirsch does not explicitly teach grouping the plurality of content providers into a plurality of privacy groups. Juels does teach this limitation (at paragraph 46, as group privacy) to target information delivery. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kirsch with grouping the plurality of content providers into a plurality of privacy groups) to target information delivery as described by Juels (abstract).

**As per claim 10** same as claim arguments above and Kirsch does not explicitly teach wherein the at least one privacy group comprises at least three contents. Juels does teach this limitation (at paragraph 46, as group privacy) to target information delivery. It

would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kirsch with wherein the at least one privacy group comprises at least three contents to target information delivery as described by Juels (abstract).

**As per claim 11** same as claim arguments above and Kirsch does not explicitly teach wherein each of the content providers is grouped into one privacy group. Juels does teach this limitation (at paragraph 46, as group privacy) to target information delivery. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kirsch with the content providers is grouped into one privacy group to target information delivery as described by Juels (abstract).

**As per claim 12** same as claim arguments above and Kirsch teaches:  
further comprising performing a randomized index construction algorithm to create the bit vectors for the content providers ... (column 7, line 65 to column 8, line 5,, indexing algorithm).

**As per claim 19** same as claim arguments above and Kirsch teaches:  
wherein a content provider performs the randomized index construction algorithm to create a provider keyword bit vector... (column 7, line 65 to column 8, line 5,, indexing algorithm).

**As per claim 21** same as claim arguments above and Kirsch teaches:



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wherein content providers in the ring formation sequentially perform the randomized index construction algorithm on the provider keyword bit vector. ... (column 7, line 65 to column 8, line 5,, indexing algorithm).

**As per claim 22** same as claim arguments above and Kirsch teaches:

further comprising the content providers in the ring formation passing provider keyword bit vectors and performing the randomized construction algorithm on the keyword bit vector until the provider keyword bit vector has completed r rounds around the ring formation... (column 7, line 65 to column 8, line 5,, indexing algorithm).

Claims 29-30, 35 are rejected based on the same rationale as claims 9, 12 above.

**Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch as applied to claim1 above, and further in view of US 2002/0026345 issued to Ari Juels ("Juels") and further in view of US 2005/0076104 issued to Barbara Liskov et al ("Liskov").**

**As per claim 13** same as claim arguments above and Kirsh further in view of Juels do not explicitly teach arranging the content providers in the privacy group in a ring formation. Liskov does teach this limitation (at paragraph 10, as content providers in star topology) formation to accelerate access to the content on behalf of the user. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Kirsh further in view of Juels with arranging the content providers in the privacy group in a ring formation to accelerate access to the content on behalf of

the user as described by Liskov (paragraph 4, lines 1-4).

**Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch as applied to claim1 above, and further in view of US 2002/0026345 issued to Ari Juels ("Juels") and further in view of US 6,879,976 issued to David E. Brookler et al ("Brookler").**

**As per claims 23 –24** same as claim arguments above and Kirsch further in view of Juels do not explicitly teach bit vectors . Brookler does teach this limitation (column 2, lines 50-55,as bit vectors). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kirsh and Juels with bit vectors to efficiently index data as described by Brookler (column 2, lines 48-50).

**Claims 14-18,20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kirsch as applied to claim1 above, and further in view of US 2002/0026345 issued to Ari Juels ("Juels") and further in view of US 2005/0076104 issued to Barbara Liskov et al ("Liskov") and further in view of US 6,879,976 issued to David E. Brookler et al ("Brookler").**

**As per claims 14-18,20** same as claim arguments above and Kirsch further in view of Juels further in view of Liskov do not explicitly teach bit vectors . Brookler does teach this limitation (column 2, lines 50-55,as bit vectors). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kirsh and Juels with bit vectors to efficiently index data as described by Brookler (column 2, lines 48-

50).

**Contact Information**


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan Rayyan whose telephone number is (571) 272-1675. The examiner can normally be reached M-F: 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Susan Rayyan

March 31, 2007

  
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